Amendments to the Claims:

1. (currently amended) A method of optical network termination for removing ~~accumulated~~ noise accumulation in an optical network ~~having one or more channels~~, said method comprising the steps of:

receiving over said optical network one or more input optical signals potentially corrupted with noise accumulation ~~transmitted over said one or more channels of said optical network, each channel potentially corrupted with accumulated noise~~;

filtering said one or more input optical signals so as to remove ~~accumulated~~ said noise accumulation and to generate one or more filtered optical signals therefrom; and

outputting said ~~output optical signal~~ one or more filtered optical signals onto said ~~one or more channels on said~~ optical network.

2. (currently amended) The method according to claim 1, wherein said step of filtering comprises the steps of:

demultiplexing said one or more input optical ~~signal~~ signals into ~~a plurality of~~ individual optical ~~channels~~ signals having different wavelengths~~, each said optical channel having a unique wavelength~~; and

multiplexing said plurality of individual optical ~~channels~~ signals so as to generate ~~an output~~ said one or more filtered optical ~~signal~~ signals, wherein said steps of multiplexing and multiplexing function to remove accumulated noise from each individual optical ~~channel~~ signal.

3. (currently amended) The method according to claim 2, wherein said step of demultiplexing ~~is operative to generate a plurality of channels each corresponding to a different wavelength~~ generates said individual optical signals whereby the wavelength of each individual optical signal is fixed.

4. (currently amended) The method according to claim [[2]] 1, wherein said ~~step of multiplexing is operative to generate an optical signal from a plurality of channels each corresponding to a different wavelength~~ noise accumulation comprises noise caused by amplifier spontaneous emissions (ASE).

5. (currently amended) The method according to claim 2, wherein said step of demultiplexing is operative to be transparent to [[the]] a bit-rate of each individual optical ~~channel~~ signal.

6. (currently amended) The method according to claim 2, wherein said step of demultiplexing is operative to be transparent to [[the]] a protocol of each individual optical ~~channel~~ signal.

7-10. (canceled)

11. (currently amended) The method according to claim 1, further comprising ~~the step of~~ monitoring the power level of each individual optical ~~channel~~ signal.

12. (currently amended) The method according to claim 1, further comprising ~~the step of~~ equalizing the gain of each individual optical ~~channel~~ signal.

13. (currently amended) The method according to claim 1, further comprising the step of enabling and disabling each individual optical ~~channel~~ signal in response to a corresponding control input.

14. (currently amended) The method according to claim 1, wherein said ~~multi-channel~~ optical network employs dense wavelength division multiplexing (DWDM) techniques.

15-16. (canceled)

17. (original) The method according to claim 1, wherein said optical network comprises an optical ring network.

18-20. (canceled)

21. (currently amended) An optical network terminator for removing accumulated noise from a wavelength division multiplexed (WDM) optical signal in an optical network, comprising:

an optical demultiplexer operative to demultiplex ~~each~~ said ~~input multi-channel~~ WDM optical signal into ~~a plurality of~~ individual optical channels having different wavelengths whereby accumulated noise in said WDM optical signal at the input to said optical demultiplexer is removed from said individual optical channels~~, each said optical channel having a unique wavelength~~; and

an optical multiplexer optically coupled to said optical demultiplexer, said optical multiplexer operative to multiplex said ~~plurality of~~ individual optical channels to generate ~~one or more output multi-channel optical signals~~ a filtered WDM optical signal therefrom with ~~wherein accumulated~~ noise accumulation ~~present at the input to said optical demultiplexer is substantially~~ removed.

22-23. (canceled)

24. (currently amended) The optical network terminator according to claim 21, wherein said optical ~~demultiplexer is operative to generate a plurality of channels each corresponding to a different wavelength~~ network comprises an optical ring network.

25. (currently amended) The optical network terminator according to claim 21, wherein said ~~optical multiplexer is operative to generate an optical signal from a plurality of channels each corresponding to a different wavelength~~ noise accumulation comprises noise caused by amplifier spontaneous emissions (ASE).

26. (currently amended) The optical network terminator according to claim 21, wherein said optical demultiplexer is adapted to be transparent to [[the]] a bit-rate of each individual optical channel.

27. (currently amended) The optical network terminator according to claim 21, wherein said optical demultiplexer is adapted to be transparent to [[the]] a protocol of each individual optical channel.

28. (previously amended) The optical network terminator according to claim 21, further comprising a monitor coupled in-line with each optical channel between said optical demultiplexer and said optical multiplexer, said monitor adapted to monitor the power level of each individual optical channel.

29. (previously amended) The optical network terminator according to claim 21, further comprising an equalizer coupled to each optical channel between said optical demultiplexer and said optical multiplexer, said equalizer adapted to equalize the optical gain of each individual optical channel.

30. (previously amended) The optical network terminator according to claim 21, further comprising an optical switch mechanism coupled to each optical channel between said optical demultiplexer and said optical multiplexer, said optical switch mechanism adapted to enable and disable each individual optical channel in response to a corresponding control input.

31. (currently amended) The optical network terminator according to claim 21, wherein ~~said multi-channel optical network employs wavelength division multiplexing techniques~~ the wavelength of each individual optical channel is determined by said optical demultiplexer.

32. (previously amended) The optical network terminator according to claim 21, further comprising switch means adapted to virtually disconnect one or more optical fibers connecting said optical demultiplexer and said optical multiplexer thus shutting off one or more optical channels.

33. (previously amended) The optical network terminator according to claim 21, further comprising an optical attenuator placed in series with each optical channel between said optical demultiplexer and said optical multiplexer, said optical attenuator adapted to control the power level of the optical signal in each individual channel.

34. (original) The optical network terminator according to claim 21, further comprising means for reducing cross talk placed in series with each optical channel, said means operative to reduce the cross talk between adjacent optical channels.

35. (previously amended) The optical network terminator according to claim 21, further comprising gain setting means placed in series with each optical channel between said optical demultiplexer and said optical multiplexer, said gain setting means adapted to set the gain of each channel substantially equal to each other.

36. (currently amended) An optical network, comprising:

a plurality of nodes, wherein ~~communications~~ optical signals communicated from node to node include ~~a desired signal in addition to~~ desirable information and undesirable accumulated noise;

an optical network terminator for removing accumulated noise from a wavelength division multiplexed (WDM) optical signal in said optical network, wherein said optical network terminator comprises:

~~an optical demultiplexer operative to demultiplex each said input multi-channel optical signals into a plurality of individual optical channels, each said optical channel having a unique wavelength; and~~

~~an optical multiplexer operative to multiplex said plurality of individual optical channels to generate an output multi-channel optical signal wherein accumulated noise present at the input to said optical demultiplexer is substantially removed.~~

an optical demultiplexer operative to demultiplex said WDM optical signal into individual optical channels having different wavelengths whereby accumulated noise in said

WDM optical signal at the input to said optical demultiplexer is removed from said individual optical channels; and

an optical multiplexer optically coupled to said optical demultiplexer, said optical multiplexer operative to multiplex said ~~of~~ individual optical channels to generate a filtered WDM optical signal therefrom with noise accumulation removed.

37. (currently amended) The network according to claim 36, wherein said ~~optical demultiplexer is operative to generate a plurality of channels each corresponding to a different wavelength~~ noise accumulation comprises noise caused by amplifier spontaneous emissions (ASE).

38. (currently amended) The network according to claim 36, wherein ~~said optical multiplexer is operative to generate an optical signal from a plurality of channels each corresponding to a different wavelength~~ the wavelength of each individual optical channel is fixed and determined by said optical demultiplexer.

39. (currently amended) The network according to claim 36, wherein said optical demultiplexer is adapted to be transparent to [[the]] a bit-rate of each individual optical channel.

40. (currently amended) The network according to claim 36, wherein said optical demultiplexer is adapted to be transparent to [[the]] a protocol of each individual optical channel.

41. (previously amended) The network according to claim 36, further comprising a monitor coupled in-line with each optical channel between said optical demultiplexer and said optical multiplexer, said monitor adapted to monitor the power level of each individual optical channel.

42. (previously amended) The network according to claim 36, further comprising an equalizer coupled to each optical channel between said optical demultiplexer and said optical multiplexer, said equalizer adapted to equalize the optical gain of each individual optical channel.

43. (previously amended) The network according to claim 36, further comprising an optical switch mechanism coupled to each optical channel between said optical demultiplexer and said optical multiplexer, said optical switch mechanism adapted to enable and disable each individual optical channel in response to a corresponding control input.

44. (currently amended) The network according to claim 36, wherein said multi-channel optical network employs dense wavelength division multiplexing (DWDM) techniques.

45. (previously amended) The network according to claim 36, further comprising switch means adapted to virtually disconnect one or more optical fibers connecting said optical demultiplexer and said optical multiplexer thus shutting off one or more optical channels.

46. (previously amended) The network according to claim 36, further comprising an optical attenuator placed in series with each optical channel between said optical demultiplexer and said optical multiplexer, said optical attenuator adapted to control the power level of the optical signal in each individual channel.

47. (original) The network according to claim 36, further comprising means for reducing cross talk placed in series with each optical channel, said means operative to reduce the cross talk between adjacent optical channels.

48. (previously amended) The network according to claim 36, further comprising gain setting means placed in series with each optical channel between said optical demultiplexer and said optical multiplexer, said gain setting means adapted to set the gain of each channel substantially equal to each other.

49. (original) The network according to claim 36, wherein said optical network comprises an optical ring network.

50-52. (canceled)

53. (currently amended) An optical ring network, comprising:

a plurality of nodes situated around said optical ring, wherein a portion of said nodes employs one or more optical amplifiers;

an optical network terminator for removing ~~accumulated~~ noise accumulation from a wave division multiplexed (WDM) optical signal in said optical ring network, wherein said optical network terminator comprises:

~~an optical demultiplexer operative to demultiplex an input multi-channel optical signal into a plurality of individual optical channels, each said optical channel having a unique wavelength;~~

an optical demultiplexer operative to demultiplex said WDM optical signal into individual optical channels having different wavelengths whereby noise

accumulation in said WDM optical signal at the input to said optical demultiplexer is removed from said individual optical channels;

a plurality of optical attenuators, each optical attenuator coupled in-line to an individual optical channel, said optical attenuator operative to ~~very~~ vary the optical gain of an optical signal;

a plurality of monitors, each monitor coupled in-line to an individual optical channel, said monitor operative to measure the optical power of an optical signal; and

~~an optical multiplexer operative to multiplex said plurality of individual optical channels so as to generate an output multi-channel optical signal wherein accumulated noise present at the input to said optical demultiplexer is substantially removed.~~

an optical multiplexer optically coupled to the output of said plurality of monitors, said optical multiplexer operative to multiplex said ~~of~~ individual optical channels to generate a filtered WDM optical signal therefrom with noise accumulation removed.

54. (original) The network according to claim 53, wherein said optical demultiplexer is operative to generate eight channels corresponding to eight different wavelengths.

55. (currently amended) The network according to claim 53, wherein said optical multiplexer is operative to ~~generate~~ multiplex eight channels corresponding to eight different wavelengths.

56. (original) The network according to claim 53, wherein said optical ring terminator is adapted to be transparent to the bit-rate of each individual optical channel.

57. (original) The network according to claim 53, wherein said optical ring terminator is adapted to be transparent to the protocol of each individual optical channel.

58. (original) The network according to claim 53, wherein said optical ring terminator is adapted to provide remote enabling/disabling of individual optical channels.

59. (original) The network according to claim 53, wherein said optical ring terminator is adapted to enable the gain equalization of said plurality of optical channels.

60. (original) The network according to claim 53, wherein said optical ring terminator is adapted to enable in-line monitoring of power level of said plurality of optical channels.

61-62. (canceled)

63. (currently amended) ~~A method of reducing accumulated noise in an optical ring network having one or more channels, said method comprising the steps of:~~ An optical ring network employing wave division multiplexing (WDM), comprising:

~~receiving over said ring an input optical signal containing a single channel and having a wavelength associated therewith;~~

~~filtering said input optical signal at a frequency corresponding to said wavelength, thereby removing said accumulated noise;~~

~~generating an output optical signal from said filtered input optical signal; and~~

~~outputting said output optical signal onto said ring.~~

a plurality of nodes optically coupled to each other to form an optical ring;

one or more optical amplifiers located with said plurality of nodes, each optical amplifier causing amplifier spontaneous emissions noise to be injected and accumulated onto WDM optical signals transmitted from node to node in said optical ring;

an optical terminator located between any two nodes on said optical ring, said optical terminator for removing accumulated amplifier spontaneous emissions noise from said wavelength division multiplexed (WDM) optical signals, comprising:

an optical demultiplexer operative to demultiplex said WDM optical signal into individual optical signals having different wavelengths whereby noise accumulation in said WDM optical signal at the input to said optical demultiplexer is removed from said individual optical signals; and

an optical multiplexer optically coupled to said optical demultiplexer, said optical multiplexer operative to multiplex said ~~of~~ individual optical signals to generate a filtered WDM optical signal therefrom with noise accumulation removed.

64. (currently amended) The method according to claim 63, wherein ~~said step of filtering comprises the steps of:~~ the wavelength of each individual optical signal is determined by said optical demultiplexer.

~~demultiplexing said input optical signal into at least one individual optical channel, each said optical channel having a unique wavelength; and~~

~~multiplexing said at least one individual optical channel to generate an output optical signal.~~

65. (canceled)